Going Native

Why Planting Native Species is Important

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What is Considered a Native Species?

- Occur without any direct or indirect human activity.
- Occurred in North America prior to European settlement.

Goldenrod (*Solidago*)

Why do Native Plants Matter?

American Beautyberry (*Callicarpa americana*)

- Helping to increase local population of native species provides numerous benefits
  - Invertebrates with woody debris
  - Pollinators with flowers
  - Birds with structural habitat that can only be rebuilt by planting native species

Benefits of Native Plants

- Add beauty to landscape & preserve natural heritage
- Provide food & habitat for native wildlife
- Serve as an important genetic resource for future food crops or other plant-derived products

Benefits of Native Plants

- Help slow down the spread of wildfire by staying greener longer
- Decrease the amount of water needed for landscape maintenance
- Require very little long-term maintenance if they are properly planted and established
- Produce long root systems to hold soil in place.

Invasive Species

- Nonnative plants are those that are growing outside their natural range.
- Over the years, nonnatives have become popular with homeowners as well as lawn and garden centers.
- Some of these such as Callery Pear trees, privet, mimosa trees, and cogongrass are invasive and have aggressively spread into natural areas across the state.
- These invasive species threaten our native plants and can quickly crowd them out.

Where to Begin

- Establishing a timeframe
- Determining project targets
- Site evaluation
- Choosing plant species
- Plant selection
- Reintroduction of native species
- Preparing the site
- Planting the site
- Caring for the native plants

Establishing a Realistic Time Frame

- Plan well in advance
- Thoroughly evaluate the site
- Develop a well thought out site preparation & planting plan
- Evaluate during different seasons
- Gathering locally adapted plant material – may not be immediately available
- Seed collection
- Involve local experts in design & development of the project

Determining Project Targets

- Define the “problem”
  - Soil erosion
  - Low native biodiversity
  - Invasive species

- Set realistic goals & objectives

Examples of Goals & Objectives

Goal: increase available wildlife habitat

Objective: plant native plants that can provide food for local wildlife

Measurable Criterium: establish greater than 50% cover of native plant species that are providing food for wildlife

Goal: improve water quality

Objective: plant native species that require less fertilizers and pesticides than non-native plants, reducing chemical run-off into local streams

Measurable Criterium: reduce the quantity of commercial fertilizers used on site by 90%

Goal: reduce soil erosion

Objective: plant native species that will develop strong extensive root structures to hold soil in place

Measurable Criterium: reduce soil loss to less than 5 Mg/ha per year

Site Evaluation

- Critical factor in success of project
- Right plant, right place
- Evaluate during all seasons

Site Evaluation: Characteristics to consider

- Soils
- Topography
- Hydrology
- Existing ecological communities
- Disturbances
- Climate

Soils

- Texture
- pH
  - <5 strongly acidic
  - 5 – 6.5 moderately acidic
  - 7 neutral
  - 7 – 8.5 alkaline
  - 8.5 or higher strongly alkaline
- Organic Matter
- Compaction
- Residual herbicides / pesticides

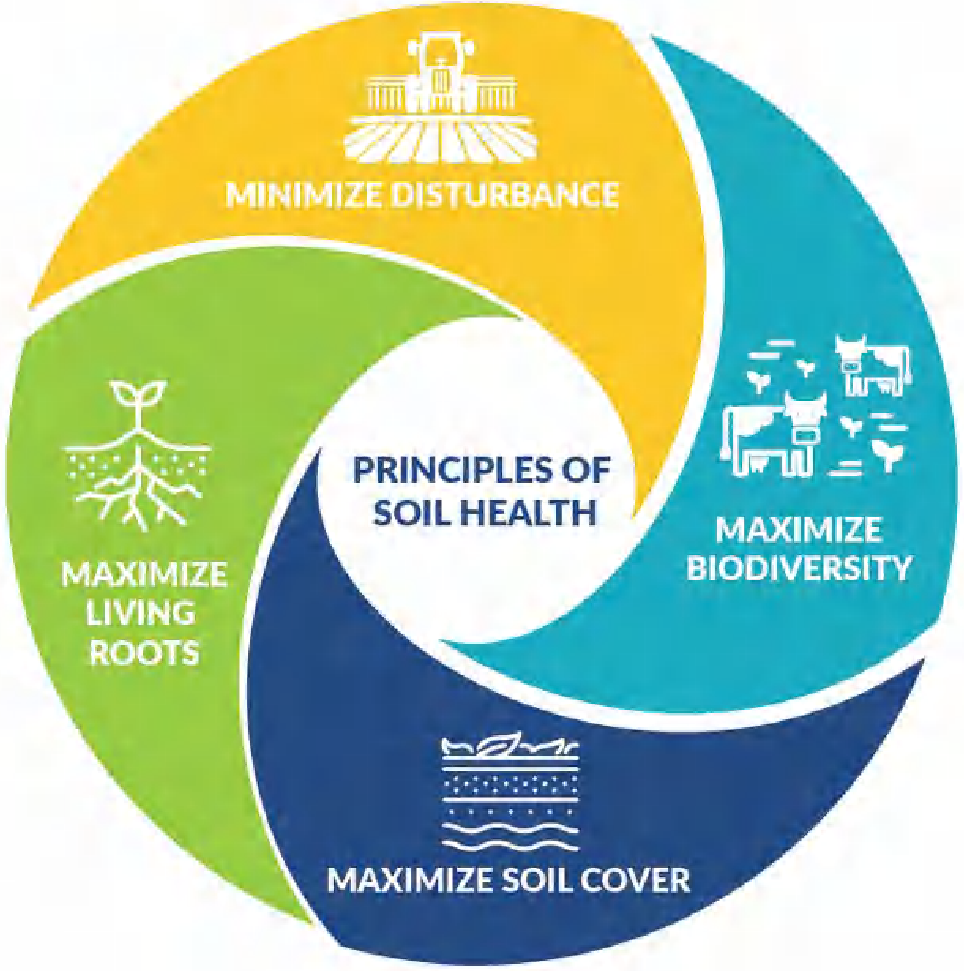


Photo courtesy of USDA

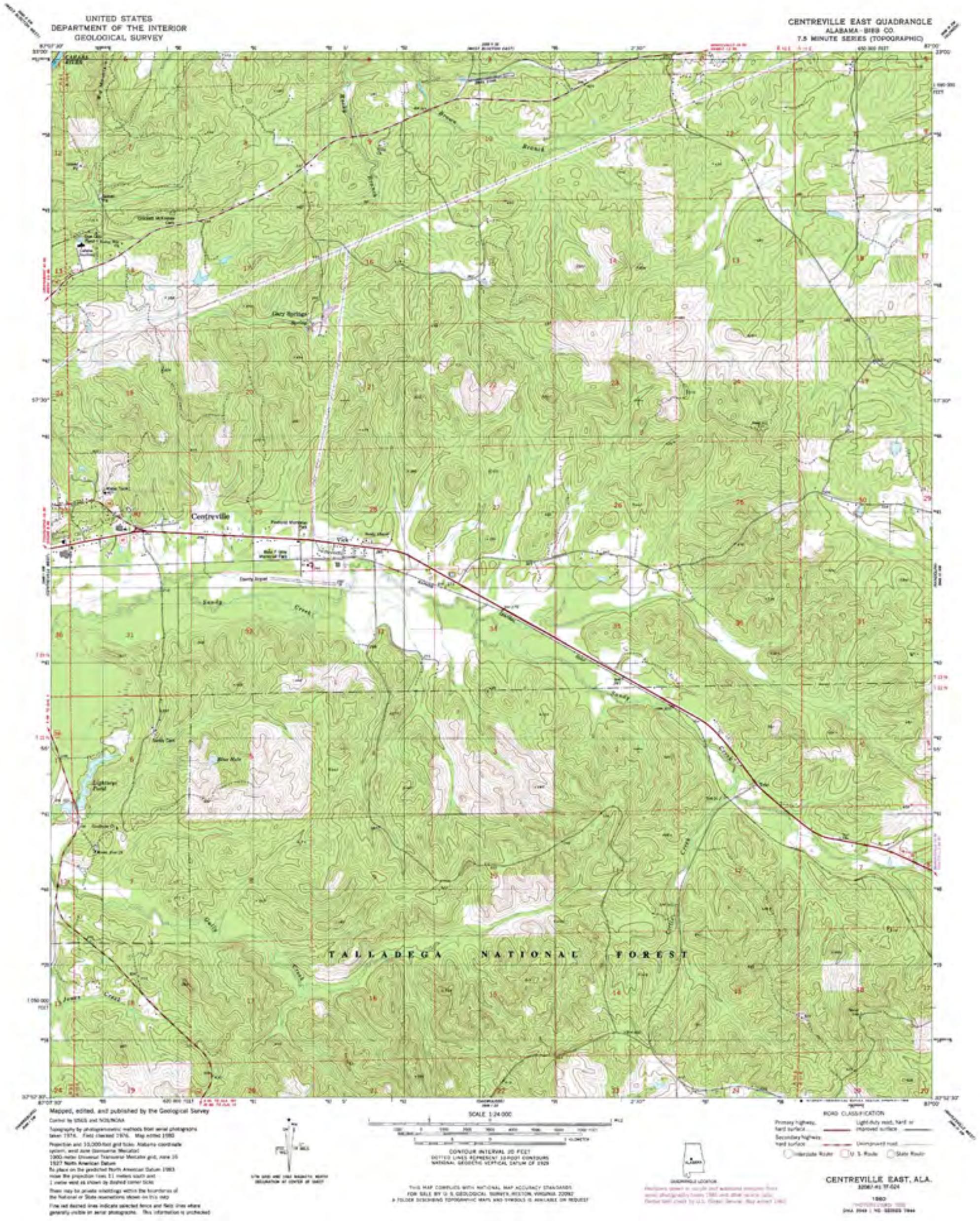
https://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm

Topography

The arrangement of the natural and artificial physical features of an area.

Steep slopes?
Low lying areas?

https://www.gsa.state.al.us/inter/topos24k


UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
CENTREVILLE EAST QUADRANGLE
ALABAMA–BIBB CO.
7.5 MINUTE SERIES (TOPOGRAPHIC)
Centreville
TALLADEGA NATIONAL FOREST
CENTREVILLE EAST, ALA.

Hydrology

- Hydrology of a site will determine the amount of water available to plants during different times of the year.
- The choice of native plant species and the locations for planting should be heavily influenced by the hydrology at the site.
- For assistance in finding hydrologic information, visit the U.S. Geological website

[Water Resources | U.S. Geological Survey (usgs.gov)](https://www.usgs.gov)

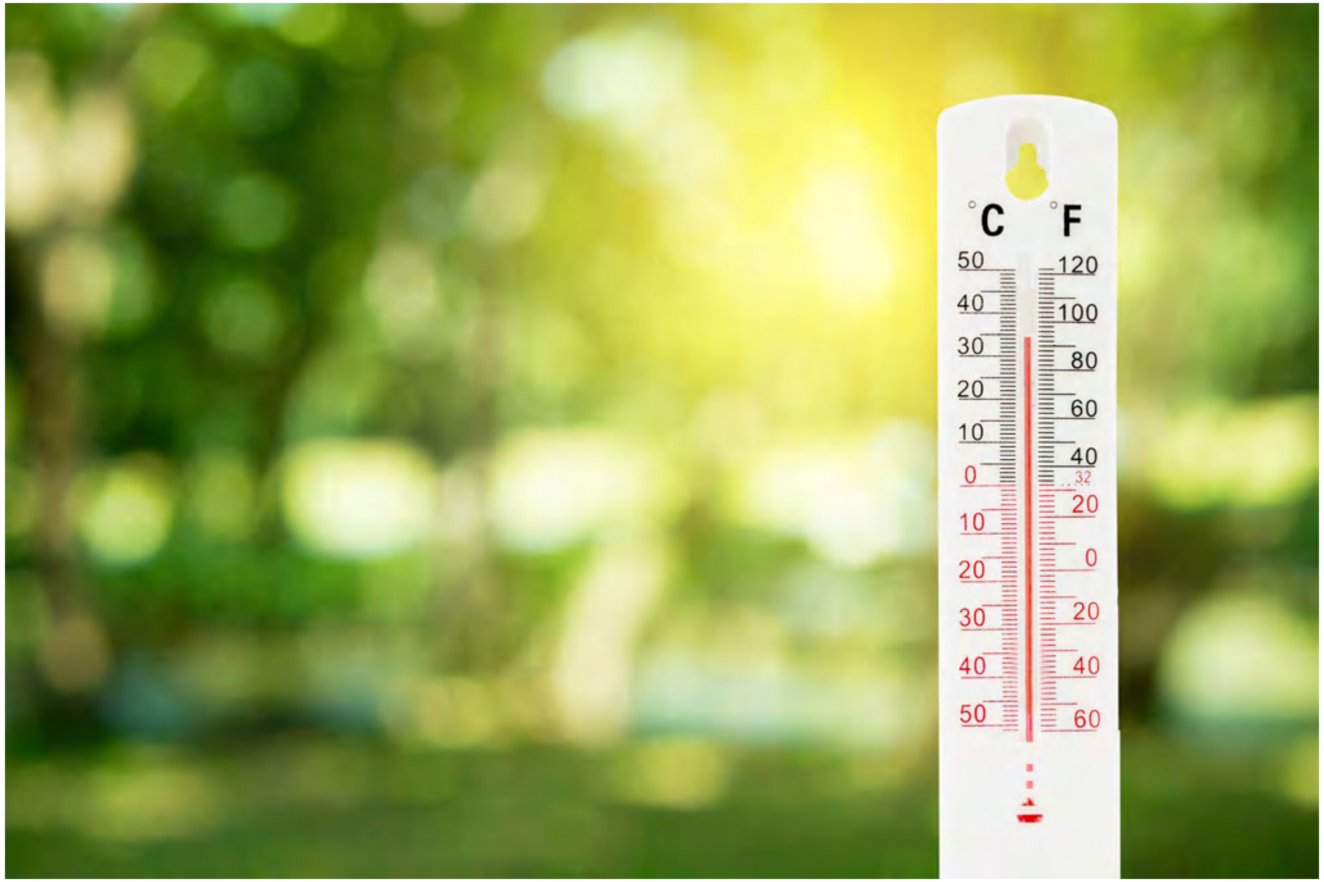
Existing Ecological Communities

- Knowing what is already living on the site can help predict what species are likely to succeed on the site
- Identifying plants on site
- Any native species should be included in plan
- Are there invasive species present?
- Inventory of wildlife present

Disturbances

- chemical contamination
- fire or suppression of fire
- flooding
- fragmentation and roads
- grazing
- hurricanes
- invasive species
- wind

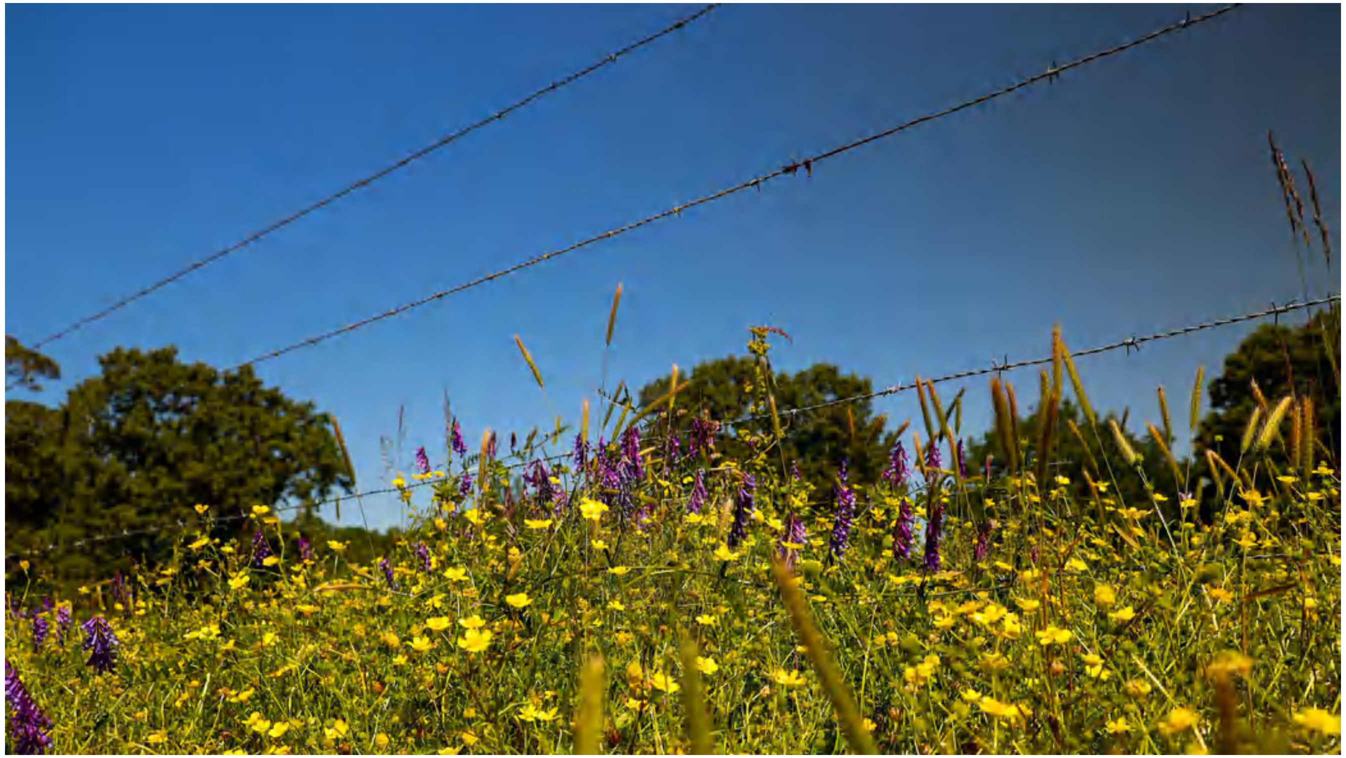
Climate



- Maximum and minimum temperatures (daily, monthly, yearly)
- Number of frost-free days
- seasonality of precipitation (wet winters, dry summers)
- Total average yearly precipitation
- Aspect of site (north-facing or south-facing)
- Elevation
- Shade
- Paved areas

Choosing Appropriate Plant Species

- Choose native species that will match site conditions
  - Water, light & nutrient availability
- Plant associations
- To help in selecting plant species
  - Native species are already on site
  - Reference sites
  - Local plant experts
  - Literature on local plant communities
  - Historical records of the site

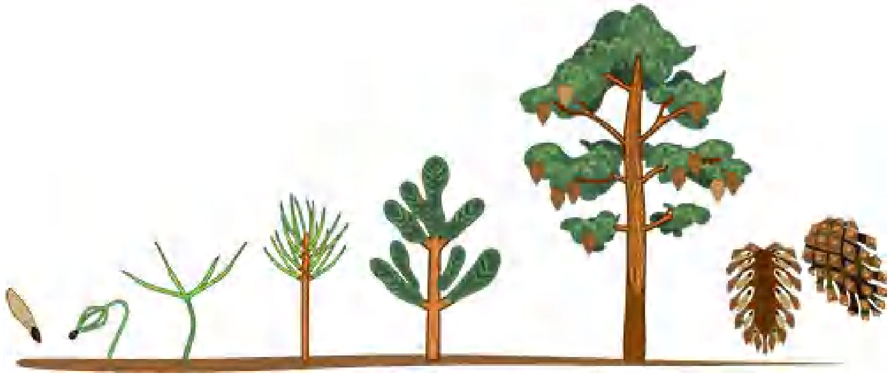


Reintroduction of Natives

- Active Reintroduction
- Natural Reintroduction
- Combination

Natural Reintroduction

- Consider site conditions & needs of selected plants
- Understand why native plants are not present on site
- Is there an adequate source of native plant reproductive material?



Active Reintroduction

- Seeding or planting?
- Consider costs
- Ease of planting
- Success / failure rates

Seed Sources

- Consider using donor soil from a similar intact native plant community
- Using weed-free wild hay from a native grassland or wetland
- Collecting seeds
- Buying local native seeds from a supplier / grower

Do’s & Don’ts of Seed Collection

- **Do** match the donor and site conditions as much as possible: slope, aspect, hydrology, soil type, frost dates, temperature patterns, elevation, ect.
- **Do** collect in an area geographically near to planting site
- **Don’t** collect from ornamental plantings or near other exotics.
- **Do** make sure none of the seeds collected are from rare species
- **Do** obtain permission from the landowner to collect seed on private land or the required permit(s) for public lands.
- **Don’t** harm donor populations.

Plant Sources

- Contract with a native plant supplier to grow the plant material
- Salvage plants from a site that is about to be destroyed
- Buy already grown plants from a nursery

Selecting Plant Product Types

- Balled-in-Burlap
- Bare-root
- Containers
- Cuttings
- Liners
- Plugs

Type	Advantages	Disadvantages
Balled-in-burlap	Well developed root system Provide shade & earlier establishment of upper canopy	Expensive Large and heavy to transport
Bare-root	Less expensive Easier to transport Roots have not been constricted by containers	Native soil not used in nursery Can be difficult to provide irrigation until established.
Liners / Plugs / Seedlings	Well established root systems Easy to transplant	Smaller plants may take longer to establish Native soil not used in nursery
Cuttings	Inexpensive May easily be taken from site Known to work well in rocky areas or areas difficult to access	No established root system Timing of taking cuttings & planting is important & varies among species
Seed	Inexpensive Variety commercially available Easier to plant	Different germination and storage requirements Potential loss from wildlife Slower to establish

Selecting a Supplier

- Native plant material is available from
  - Commercial seed suppliers
  - Some nurseries, growers & seed collectors

- Timing, Timing, Timing

Plant Material Suppliers

- Select nurseries or plant growers that have experience working in the site's region
- Supplier should have staff knowledgeable about local native flora.
- Interview the grower about their knowledge of propagating all planned species.
- Ask them to send catalogs and/or price lists if available.

Seed Suppliers

- Choose a seed supplier that operates in the same geographic area
- There are companies which specialize in native seed collection, processing, and growing.
- Request seed catalogs and price lists if available
- Become familiar with Seed Classes – there are 4 seed classes
  - Breeder seed
  - Foundation seed
  - Registered seed
  - Certified seed

AOSCA – Association of Official Seed Certifying Agencies

Evaluating Plant Material

- Not all plant material is created equal.
- Vigor
- Injury
- Pests
- Species labels
- Roots

Preparing the Site

- Ensure that the site conditions are what the plants need to grow and survive
- Ensuring that the site is complex
- Remove / treat invasive species on site
- Reduced soil function

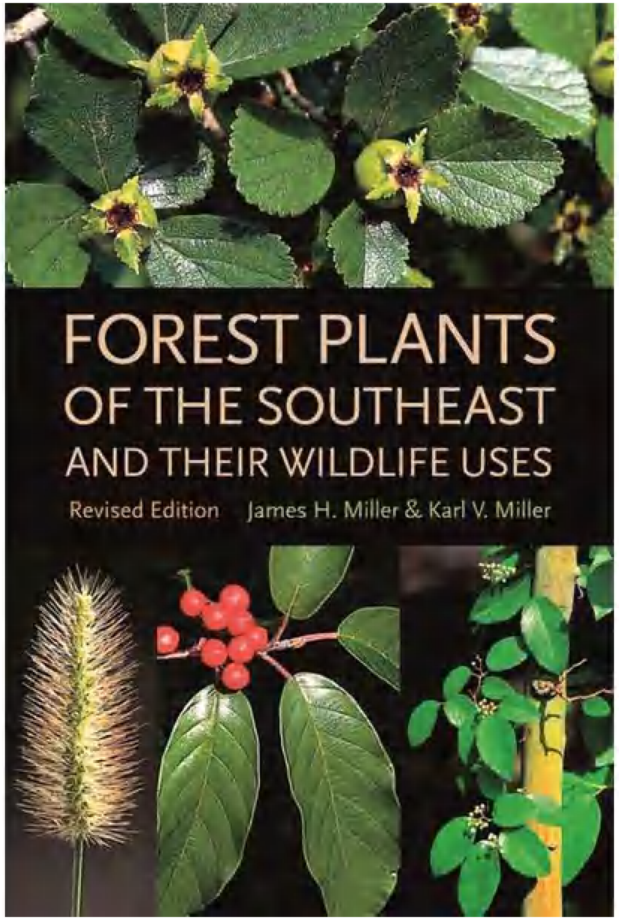
Planting the Site!

- Timing
- Site Prep
- Seed Mixes
- Seeding Techniques
- Mulch

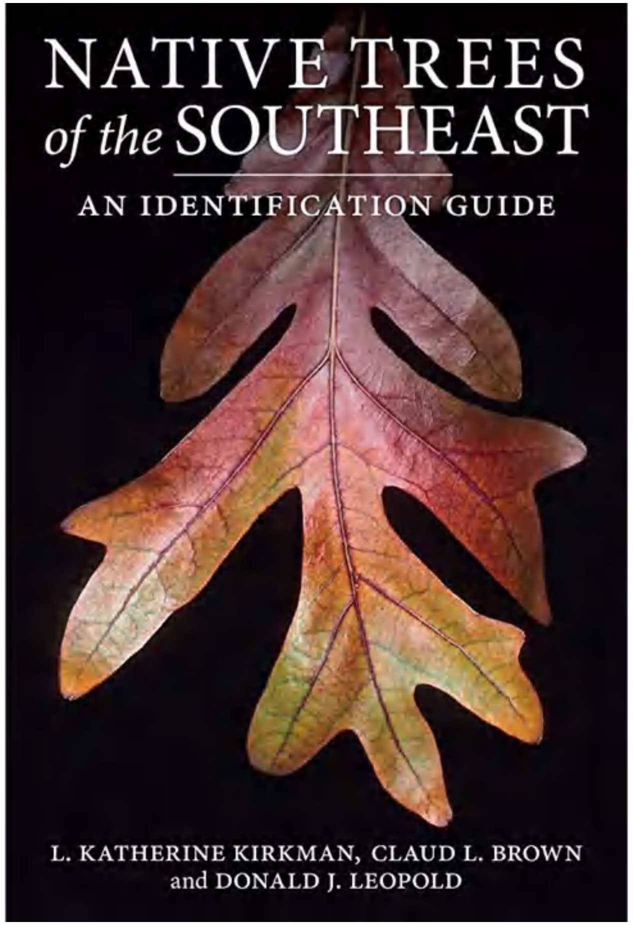
Caring for the Site

- Watering
- Erosion Control
- Invasive Species Control
- Fertilization
- Pest Management

Reference Books



FOREST PLANTS
OF THE SOUTHEAST
AND THEIR WILDLIFE USES
Revised Edition James H. Miller & Karl V. Miller



NATIVE TREES
of the SOUTHEAST
AN IDENTIFICATION GUIDE
L. KATHERINE KIRKMAN, CLAUD L. BROWN
and DONALD J. LEOPOLD

QUESTIONS?
ANSWERS!

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